WEST Search History

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DATE: Wednesday, August 25, 2004

Hide?	Set Name	Query	Hit Count
	DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=ADJ		
☐	L7	L6 and terminating	6
☐	L6	L4 and interface	76
☐	L5	L4 and interface	76
☐	L4	L3 and immiscible	96
☐	L3	L2 and etchant$	17740
☐	L2	L1 and wafer	85049
☐	L1	etching and layer	285719

END OF SEARCH HISTORY

h e b b cg b chh e e f c e e

Refine Search

Search Results -

Term	Documents
TWO	7726701
TWOES	46
TWOS	3317
TWOE	349
FLUIDS	358362
FLUID	1687231
(6 AND (TWO ADJ FLUIDS)).PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD.	6
(L6 AND (TWO FLUIDS)).PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD.	6

Database:
US Pre-Grant Publication Full-Text Database
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JPO Abstracts Database
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IBM Technical Disclosure Bulletins

Search: L8

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Search History

DATE: Wednesday, August 25, 2004 Printable Copy Create Case

Set Name side by side	Query	Hit Count	Set Name result set
DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=ADJ			
L8	l6 and (two fluids)	6	L8
L7	L6 and terminating	6	L7
L6	L4 and interface	76	L6
L5	L4 and interface	76	L5
L4	L3 and immiscible	96	L4

h e b b cg b e e ch

L3	L2 and etchant$	17740	L3
L2	L1 and wafer	85049	L2
L1	etching and layer	285719	L1

END OF SEARCH HISTORY

h e b b cg b e e ch

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Search Results - Record(s) 1 through 6 of 6 returned.

☐ 1. Document ID: US 20040026615 A1

L7: Entry 1 of 6 File: PGPB Feb 12, 2004

PGPUB-DOCUMENT-NUMBER: 20040026615
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20040026615 A1

TITLE: Methods, devices, and systems using acoustic ejection for depositing fluid droplets on a sample surface for analysis

PUBLICATION-DATE: February 12, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Ellson, Richard N.	Palo Alto	CA	US	
Mutz, Mitchell W.	Palo Alto	CA	US	
Caprioli, Richard Michael	Brentwood	TN	US	

US-CL-CURRENT: 250/288

ABSTRACT:

Provided is a method for preparing a sample surface for analysis that involves placing a sample surface in droplet-receiving relationship to a reservoir containing an analysis-enhancing fluid. Typically, the analysis-enhancing fluid is comprised of a mass spectrometry matrix material and a carrier fluid, and the carrier fluid is comprised of a low volatility solvent. A droplet of the analysis-enhancing fluid from the reservoir such that the droplet is deposited on the sample surface at a designated site. Such ejection is typically, but not necessarily carried out through the application of focused acoustic energy. Then, the sample is subjected to conditions sufficient to allow the analysis-enhancing fluid to interact with the sample surface to render the sample surface suitable for analysis. Optionally, the sample is analyzed at the selected site. Also provided are systems and devices for preparing a sample surface for analysis.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KMC | Draw De

☐ 2. Document ID: US 20020195558 A1

L7: Entry 2 of 6 File: PGPB Dec 26, 2002

PGPUB-DOCUMENT-NUMBER: 20020195558

h e b b g ee e f e e ef b e

PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20020195558 A1

TITLE: Method and system using acoustic ejection for selective fluid deposition on a nonuniform sample surface

PUBLICATION-DATE: December 26, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Ellson, Richard N.	Palo Alto	CA	US	
Mutz, Mitchell W.	Palo Alto	CA	US	
Caprioli, Richard Michael	Brentwood	TN	US	

US-CL-CURRENT: 250/288

ABSTRACT:

A method for selectively depositing analysis-enhancing fluid on a sample surface is disclosed. The method involves providing a sample having a surface that exhibits variations in a surface characteristic that corresponds to desirability for receiving an analysis-enhancing fluid. Once a site on the sample surface is selected according to the surface characteristic at the site, focused radiation, typically acoustic radiation, is applied in a manner effective to eject a droplet of the analysis-enhancing fluid from a reservoir. As a result, the droplet is deposited on the sample surface at the selected site. Optionally, the sample at the selected site is analyzed. Systems for selectively depositing analysis-enhancing fluids are also disclosed.

☐ 3. Document ID: US 20020082543 A1

L7: Entry 3 of 6 File: PGPB Jun 27, 2002

PGPUB-DOCUMENT-NUMBER: 20020082543
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20020082543 A1

TITLE: Microneedle devices and production thereof

PUBLICATION-DATE: June 27, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Park, Jung-Hwan	Atlanta	GA	US	
Prausnitz, Mark R.	Decatur	GA	US	

US-CL-CURRENT: 604/21; 604/117, 604/20, 606/167

ABSTRACT:

h e b b g ee e f e e ef b e

Microneedle devices and methods of manufacture are provided for transport of molecules or energy across or into biological barriers, such as skin. The device can comprise one or more microneedles formed of a first material and a second material, wherein the second material is dispersed throughout the first material or forms a portion of the microneedle. The first material preferably is a polymer. The second material can be pore forming agents, structural components, biosensor, or molecules for release, such as drug. The device also can comprise a substrate and a plurality of microneedles extending from the substrate, wherein the microneedles have a beveled or tapered tip portion, a longitudinally extending exterior channel, or both. Methods of making these devices include providing a mold having a plurality of microdepressions which define the surface of a microneedle; filling the microdepressions with a first molding material; and molding the material, thereby forming microneedles.

☐ 4. Document ID: US 6776094 B1

L7: Entry 4 of 6 File: USPT Aug 17, 2004

US-PAT-NO: 6776094
DOCUMENT-IDENTIFIER: US 6776094 B1

TITLE: Kit For Microcontact Printing

DATE-ISSUED: August 17, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Whitesides; George M.	Newton	MA		
Kumar; Amit	Milpitas	CA		

US-CL-CURRENT: 101/327; 101/368, 101/379, 101/382.1, 118/264, 156/345.1, 156/384, 156/390

ABSTRACT:

Improved methods of forming a patterned self-assembled monolayer on a surface and derivative articles are provided. According to one method, an elastomeric stamp is deformed during and/or prior to using the stamp to print a self-assembled molecular monolayer on a surface. According to another method, during monolayer printing the surface is contacted with a liquid that is immiscible with the molecular monolayer-forming species to effect controlled reactive spreading of the monolayer on the surface. Methods of printing self-assembled molecular monolayers on nonplanar surfaces and derivative articles are provided, as are methods of etching surfaces patterned with self-assembled monolayers, including methods of etching silicon. Optical elements including flexible diffraction gratings, mirrors, and lenses are provided, as are methods for forming optical devices and other articles using lithographic molding. A method for controlling the shape of a liquid on the surface of an article is provided, involving applying the liquid to a self-assembled monolayer on the surface, and controlling the electrical potential of the surface.

28 Claims, 55 Drawing figures
Exemplary Claim Number: 1

h e b b g ee e f e e ef b e

Number of Drawing Sheets: 13

Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | KWIC | Draw De

5. Document ID: US 6707038 B2

L7: Entry 5 of 6 File: USPT Mar 16, 2004

US-PAT-NO: 6707038
DOCUMENT-IDENTIFIER: US 6707038 B2

TITLE: Method and system using acoustic ejection for selective fluid deposition on a nonuniform sample surface

DATE-ISSUED: March 16, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Ellson; Richard N.	Palo Alto	CA		
Mutz; Mitchell W.	Palo Alto	CA		
Caprioli; Richard Michael	Brentwood	TN		

US-CL-CURRENT: 250/288; 422/100, 422/63, 435/30, 436/180, 73/864, 73/864.81

ABSTRACT:

A method for selectively depositing analysis-enhancing fluid on a sample surface is disclosed. The method involves providing a sample having a surface that exhibits variations in a surface characteristic that corresponds to desirability for receiving an analysis-enhancing fluid. Once a site on the sample surface is selected according to the surface characteristic at the site, focused radiation, typically acoustic radiation, is applied in a manner effective to eject a droplet of the analysis-enhancing fluid from a reservoir. As a result, the droplet is deposited on the sample surface at the selected site. Optionally, the sample at the selected site is analyzed. Systems for selectively depositing analysis-enhancing fluids are also disclosed.

55 Claims, 6 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 3

Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | KWIC | Draw De

6. Document ID: US 6180239 B1

L7: Entry 6 of 6 File: USPT Jan 30, 2001

US-PAT-NO: 6180239
DOCUMENT-IDENTIFIER: US 6180239 B1

h e b b g e e e f e e ef b e

TITLE: Microcontact printing on surfaces and derivative articles

DATE-ISSUED: January 30, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Whitesides; George M.	Newton	MA		
Xia; Younan	Cambridge	MA		
Wilbur; James L.	Germantown	MD		
Jackman; Rebecca J.	Boston	MA		
Kim; Enoch	Boston	MA		
Prentiss; Mara G.	Cambridge	MA		
Mrksich; Milan	Chicago	IL		
Kumar; Amit	MilPitas	CA		
Gorman; Christopher B.	Raleigh	NC		
Biebuyck; Hans	Thalwil			CH
Berggren; Karl K.	Cambridge	MA		

US-CL-CURRENT: 428/411.1; 101/368, 101/378, 101/379, 257/E21.575, 428/195.1

ABSTRACT:

Improved method of forming a patterned self-assembled monolayer on a surface and derivative articles are provided. According to one method, an elastomeric stamp is deformed during and/or prior to using the stamp to print a self-assembled molecular monolayer on a surface. According to another method, during monolayer printing the surface is contacted with a liquid that is immiscible with the molecular monolayer-forming species to effect controlled reactive spreading of the monolayer on the surface. Methods of printing self-assembled molecular monolayers on nonplanar surfaces and derivative articles are provided, as are methods of etching surfaces patterned with self-assembled monolayers, including methods of etching silicon. Optical elements including flexible diffraction gratings, mirrors, and lenses are provided, as are methods for forming optical devices and other articles using lithographic molding. A method for controlling the shape of a liquid on the surface of an article is provided, involving applying the liquid to a self-assembled monolayer on the surface, and controlling the electrical potential of the surface.

41 Claims, 55 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 13

Term	Documents
TERMINATING	449963
TERMINATINGS	2
(6 AND	6

h e b b g e e e f e e ef b e

TERMINATING).PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD.	
(L6 AND TERMINATING).PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD.	6

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Search Results - Record(s) 1 through 6 of 6 returned.

☐ 1. Document ID: US 20040026615 A1

L7: Entry 1 of 6 File: PGPB Feb 12, 2004

PGPUB-DOCUMENT-NUMBER: 20040026615
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20040026615 A1

TITLE: Methods, devices, and systems using acoustic ejection for depositing fluid droplets on a sample surface for analysis

PUBLICATION-DATE: February 12, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Ellson, Richard N.	Palo Alto	CA	US	
Mutz, Mitchell W.	Palo Alto	CA	US	
Caprioli, Richard Michael	Brentwood	TN	US	

US-CL-CURRENT: 250/288

ABSTRACT:

Provided is a method for preparing a sample surface for analysis that involves placing a sample surface in droplet-receiving relationship to a reservoir containing an analysis-enhancing fluid. Typically, the analysis-enhancing fluid is comprised of a mass spectrometry matrix material and a carrier fluid, and the carrier fluid is comprised of a low volatility solvent. A droplet of the analysis-enhancing fluid from the reservoir such that the droplet is deposited on the sample surface at a designated site. Such ejection is typically, but not necessarily carried out through the application of focused acoustic energy. Then, the sample is subjected to conditions sufficient to allow the analysis-enhancing fluid to interact with the sample surface to render the sample surface suitable for analysis. Optionally, the sample is analyzed at the selected site. Also provided are systems and devices for preparing a sample surface for analysis.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw De

☐ 2. Document ID: US 20020195558 A1

L7: Entry 2 of 6 File: PGPB Dec 26, 2002

PGPUB-DOCUMENT-NUMBER: 20020195558

h e b b g e e e f e e ef b e

PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20020195558 A1

TITLE: Method and system using acoustic ejection for selective fluid deposition on a nonuniform sample surface

PUBLICATION-DATE: December 26, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Ellson, Richard N.	Palo Alto	CA	US	
Mutz, Mitchell W.	Palo Alto	CA	US	
Caprioli, Richard Michael	Brentwood	TN	US	

US-CL-CURRENT: 250/288

ABSTRACT:

A method for selectively depositing analysis-enhancing fluid on a sample surface is disclosed. The method involves providing a sample having a surface that exhibits variations in a surface characteristic that corresponds to desirability for receiving an analysis-enhancing fluid. Once a site on the sample surface is selected according to the surface characteristic at the site, focused radiation, typically acoustic radiation, is applied in a manner effective to eject a droplet of the analysis-enhancing fluid from a reservoir. As a result, the droplet is deposited on the sample surface at the selected site. Optionally, the sample at the selected site is analyzed. Systems for selectively depositing analysis-enhancing fluids are also disclosed.

☐ 3. Document ID: US 20020082543 A1

L7: Entry 3 of 6 File: PGPB Jun 27, 2002

PGPUB-DOCUMENT-NUMBER: 20020082543
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20020082543 A1

TITLE: Microneedle devices and production thereof

PUBLICATION-DATE: June 27, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Park, Jung-Hwan	Atlanta	GA	US	
Prausnitz, Mark R.	Decatur	GA	US	

US-CL-CURRENT: 604/21; 604/117, 604/20, 606/167

ABSTRACT:

h e b b g e e e f e e ef b e

Microneedle devices and methods of manufacture are provided for transport of molecules or energy across or into biological barriers, such as skin. The device can comprise one or more microneedles formed of a first material and a second material, wherein the second material is dispersed throughout the first material or forms a portion of the microneedle. The first material preferably is a polymer. The second material can be pore forming agents, structural components, biosensor, or molecules for release, such as drug. The device also can comprise a substrate and a plurality of microneedles extending from the substrate, wherein the microneedles have a beveled or tapered tip portion, a longitudinally extending exterior channel, or both. Methods of making these devices include providing a mold having a plurality of microdepressions which define the surface of a microneedle; filling the microdepressions with a first molding material; and molding the material, thereby forming microneedles.

☐ 4. Document ID: US 6776094 B1

L7: Entry 4 of 6 File: USPT Aug 17, 2004

US-PAT-NO: 6776094
DOCUMENT-IDENTIFIER: US 6776094 B1

TITLE: Kit For Microcontact Printing

DATE-ISSUED: August 17, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Whitesides; George M.	Newton	MA		
Kumar; Amit	Milpitas	CA		

US-CL-CURRENT: 101/327; 101/368, 101/379, 101/382.1, 118/264, 156/345.1, 156/384, 156/390

ABSTRACT:

Improved methods of forming a patterned self-assembled monolayer on a surface and derivative articles are provided. According to one method, an elastomeric stamp is deformed during and/or prior to using the stamp to print a self-assembled molecular monolayer on a surface. According to another method, during monolayer printing the surface is contacted with a liquid that is immiscible with the molecular monolayer-forming species to effect controlled reactive spreading of the monolayer on the surface. Methods of printing self-assembled molecular monolayers on nonplanar surfaces and derivative articles are provided, as are methods of etching surfaces patterned with self-assembled monolayers, including methods of etching silicon. Optical elements including flexible diffraction gratings, mirrors, and lenses are provided, as are methods for forming optical devices and other articles using lithographic molding. A method for controlling the shape of a liquid on the surface of an article is provided, involving applying the liquid to a self-assembled monolayer on the surface, and controlling the electrical potential of the surface.

28 Claims, 55 Drawing figures
Exemplary Claim Number: 1

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Number of Drawing Sheets: 13

☐ 5. Document ID: US 6707038 B2

L7: Entry 5 of 6 File: USPT Mar 16, 2004

US-PAT-NO: 6707038
DOCUMENT-IDENTIFIER: US 6707038 B2

TITLE: Method and system using acoustic ejection for selective fluid deposition on a nonuniform sample surface

DATE-ISSUED: March 16, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Ellson; Richard N.	Palo Alto	CA		
Mutz; Mitchell W.	Palo Alto	CA		
Caprioli; Richard Michael	Brentwood	TN		

US-CL-CURRENT: 250/288; 422/100, 422/63, 435/30, 436/180, 73/864, 73/864.81

ABSTRACT:

A method for selectively depositing analysis-enhancing fluid on a sample surface is disclosed. The method involves providing a sample having a surface that exhibits variations in a surface characteristic that corresponds to desirability for receiving an analysis-enhancing fluid. Once a site on the sample surface is selected according to the surface characteristic at the site, focused radiation, typically acoustic radiation, is applied in a manner effective to eject a droplet of the analysis-enhancing fluid from a reservoir. As a result, the droplet is deposited on the sample surface at the selected site. Optionally, the sample at the selected site is analyzed. Systems for selectively depositing analysis-enhancing fluids are also disclosed.

55 Claims, 6 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 3

☐ 6. Document ID: US 6180239 B1

L7: Entry 6 of 6 File: USPT Jan 30, 2001

US-PAT-NO: 6180239
DOCUMENT-IDENTIFIER: US 6180239 B1

h e b b g e e e f e e ef b e

TITLE: Microcontact printing on surfaces and derivative articles

DATE-ISSUED: January 30, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Whitesides; George M.	Newton	MA		
Xia; Younan	Cambridge	MA		
Wilbur; James L.	Germantown	MD		
Jackman; Rebecca J.	Boston	MA		
Kim; Enoch	Boston	MA		
Prentiss; Mara G.	Cambridge	MA		
Mrksich; Milan	Chicago	IL		
Kumar; Amit	MilPitas	CA		
Gorman; Christopher B.	Raleigh	NC		
Biebuyck; Hans	Thalwil			CH
Berggren; Karl K.	Cambridge	MA		

US-CL-CURRENT: 428/411.1; 101/368, 101/378, 101/379, 257/E21.575, 428/195.1

ABSTRACT:

Improved method of forming a patterned self-assembled monolayer on a surface and derivative articles are provided. According to one method, an elastomeric stamp is deformed during and/or prior to using the stamp to print a self-assembled molecular monolayer on a surface. According to another method, during monolayer printing the surface is contacted with a liquid that is immiscible with the molecular monolayer-forming species to effect controlled reactive spreading of the monolayer on the surface. Methods of printing self-assembled molecular monolayers on nonplanar surfaces and derivative articles are provided, as are methods of etching surfaces patterned with self-assembled monolayers, including methods of etching silicon. Optical elements including flexible diffraction gratings, mirrors, and lenses are provided, as are methods for forming optical devices and other articles using lithographic molding. A method for controlling the shape of a liquid on the surface of an article is provided, involving applying the liquid to a self-assembled monolayer on the surface, and controlling the electrical potential of the surface.

41 Claims, 55 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 13

Term	Documents
TERMINATING	449963
TERMINATINGS	2
(6 AND	6

h e b b g e e e f e e ef b e

TERMINATING).PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD.	
(L6 AND TERMINATING).PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD.	6

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Search Results - Record(s) 1 through 6 of 6 returned.

☐ 1. Document ID: US 20040091398 A1

L8: Entry 1 of 6 File: PGPB May 13, 2004

PGPUB-DOCUMENT-NUMBER: 20040091398
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20040091398 A1

TITLE: Microfluidic system including a virtual wall fluid interface port for interfacing fluids with the microfluidic system

PUBLICATION-DATE: May 13, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Gilbert, John R.	Brookline	MA	US	
Chiem, Nghia H.	San Francisco	CA	US	

US-CL-CURRENT: 422/100; 436/518

ABSTRACT:

A fluid interface port in a microfluidic system and a method of forming the fluid interface port is provided. The fluid interface port comprises an opening formed in the side wall of a microchannel sized and dimensioned to form a virtual wall when the microchannel is filled with a first liquid. The fluid interface port is utilized to perform a labeling operation on a sample.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw D

☐ 2. Document ID: US 20040020518 A1

L8: Entry 2 of 6 File: PGPB Feb 5, 2004

PGPUB-DOCUMENT-NUMBER: 20040020518
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20040020518 A1

TITLE: Methods for transferring supercritical fluids in microelectronic and other industrial processes

PUBLICATION-DATE: February 5, 2004

h e b b g e e e f e e ef b e

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
DeYoung, James P.	Durham	NC	US	
McClain, James B.	Raleigh	NC	US	
Gross, Stephen M.	Chapel Hill	NC	US	
Wagner, Mark I.	Raleigh	NC	US	

US-CL-CURRENT: 134/30; 134/36, 134/37, 134/42, 134/902, 257/E21.228, 427/372.2

ABSTRACT:

A method of displacing a supercritical fluid from a pressure vessel (e.g., in a microelectronic manufacturing process), comprises the steps of: providing an enclosed pressure vessel containing a first supercritical fluid (said supercritical fluid preferably comprising carbon dioxide); adding a second fluid (typically also a supercritical fluid) to said vessel, with said second fluid being added at a pressure greater than the pressure of the first supercritical fluid, and with said second fluid having a density less than that of the first supercritical fluid; forming an interface between the first supercritical fluid and the second fluid; and displacing at least a portion of the first supercritical fluid from the vessel with the pressure of the second, preferably fluid while maintaining the interface therebetween.

☐ 3. Document ID: US 20030015425 A1

L8: Entry 3 of 6 File: PGPB Jan 23, 2003

PGPUB-DOCUMENT-NUMBER: 20030015425
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20030015425 A1

TITLE: Microfluidic system including a virtual wall fluid interface port for interfacing fluids with the microfluidic system

PUBLICATION-DATE: January 23, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Bohm, Sebastian	Bloemendaal	MA	NL	
Gilbert, John	Brookline		US	

US-CL-CURRENT: 204/453; 204/604, 422/100, 422/129, 422/188, 422/189, 436/180

ABSTRACT:

A fluid interface port in a microfluidic system and a method of forming the fluid interface port is provided. The fluid interface port comprises an opening formed in the side wall of a microchannel sized and dimensioned to form a virtual wall when the microchannel is filled with a first liquid. The fluid interface port is utilized to fill the microchannel with a first liquid, to introduce a second liquid

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into the first liquid and to eject fluid from the microchannel.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw D

☐ 4. Document ID: US 20030007898 A1

L8: Entry 4 of 6 File: PGPB Jan 9, 2003

PGPUB-DOCUMENT-NUMBER: 20030007898
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20030007898 A1

TITLE: Microfluidic system including a virtual wall fluid interface port for interfacing fluids with the microfluidic system

PUBLICATION-DATE: January 9, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Bohm, Sebastian	Bloemendaal	MA	NL	
Gilbert, John	Brookline		US	

US-CL-CURRENT: 422/100; 204/453, 204/604, 422/53, 435/287.2, 435/287.3, 435/288.5, 436/180, 436/518

ABSTRACT:

A fluid interface port in a microfluidic system and a method of forming the fluid interface port is provided. The fluid interface port comprises an opening formed in the side wall of a microchannel sized and dimensioned to form a virtual wall when the microchannel is filled with a first liquid. The fluid interface port is utilized to fill the microchannel with a first liquid, to introduce a second liquid into the first liquid and to eject fluid from the microchannel.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw D

☐ 5. Document ID: US 20020197733 A1

L8: Entry 5 of 6 File: PGPB Dec 26, 2002

PGPUB-DOCUMENT-NUMBER: 20020197733
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20020197733 A1

TITLE: Microfluidic system including a virtual wall fluid interface port for interfacing fluids with the microfluidic system

PUBLICATION-DATE: December 26, 2002

INVENTOR-INFORMATION:

h e b b g e e e f e e ef b e

NAME	CITY	STATE	COUNTRY	RULE-47
Bohm, Sebastian	Bloemendaal	MA	NL	
Gilbert, John	Brookline		US	

US-CL-CURRENT: 436/180; 204/453, 204/604, 422/100, 422/102, 422/58, 422/68.1, 435/287.1, 435/287.2, 435/288.3, 435/288.5

ABSTRACT:

A fluid interface port in a microfluidic system and a method of forming the fluid interface port is provided. The fluid interface port comprises an opening formed in the side wall of a microchannel sized and dimensioned to form a virtual wall when the microchannel is filled with a first liquid. The fluid interface port is utilized to fill the microchannel with a first liquid, to introduce a second liquid into the first liquid and to eject fluid from the microchannel.

6. Document ID: US 6454945 B1

L8: Entry 6 of 6 File: USPT Sep 24, 2002

US-PAT-NO: 6454945
DOCUMENT-IDENTIFIER: US 6454945 B1

TITLE: Microfabricated devices and methods

DATE-ISSUED: September 24, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Weigl; Bernhard H.	Seattle	WA		
Yager; Paul	Seattle	WA		
Brody; James P.	Pasadena	CA		
Holl; Mark R.	Shoreline	WA		
Forster; Fred K.	Seattle	WA		
Altendorf; Eric	Edmonds	WA		
Galambos; Paul C.	Albuquerque	NM		
Kenny; Margaret	Edmonds	WA		
Schutte; David	Auburn	WA		
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US-CL-CURRENT: 210/634; 204/600, 209/1, 209/155, 210/243, 210/511, 210/748, 422/101, 436/177, 73/61.71

ABSTRACT:

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This invention provides microfabricated systems for extraction of desired particles from a sample stream containing desired and undesired particles. The sample stream is placed in laminar flow contact with an extraction stream under conditions in which inertial effects are negligible. The contact between the two streams is maintained for a sufficient period of time to allow differential transport of the desired particles from the sample stream into the extraction stream. In a preferred embodiment the differential transport mechanism is diffusion. The extraction system of this invention coupled to a microfabricated diffusion-based mixing device and/or sensing means allows picoliter quantities of fluid to be processed or analyzed on devices no larger than silicon wafers. Such diffusion-based mixing or sensing devices are preferably channel cell systems for detecting the presence and/or measuring the quantity of analyte particles in a sample stream.

29 Claims, 28 Drawing figures
Exemplary Claim Number: 23
Number of Drawing Sheets: 19

Term	Documents
TWO	7726701
TWOES	46
TWOS	3317
TWOE	349
FLUIDS	358362
FLUID	1687231
(6 AND (TWO ADJ FLUIDS)).PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD.	6
(L6 AND (TWO FLUIDS)).PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD.	6

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